

## **SECTION 10260 BUMPER, CORNER, & WALL PROTECTION**

### **PART 1 GENERAL**

#### **1.01 RELATED SPECIFICATION SECTIONS:**

- A. Section 01000 – GENERAL REQUIREMENTS

#### **1.02 SECTION INCLUDES**

- A. Provide and install wall bumper and corner guards.
- B. Provide and install corridor wainscot wall covering protection

#### **1.03 REFERENCES**

- A. ASTM D 2843: Test Method for Density of Smoke from Burning Decomposition of Plastics.
- B. ASTM E 84: Test Method for Surface Burning Characteristics of Building Materials.
- C. ASTM E 662: Test Method for Optical Density of Smoke Generated by Solid Materials.
- D. UL 723: Test Method for Surface Burning Characteristics of Building Materials.
- E. NFPA 255: Test Method for Surface Burning Characteristics of Building Materials.

#### **1.04 DESCRIPTION**

- A. Bumper and Corner Guards shall conform to the layouts shown. Color as indicated on the drawings.

#### **1.05 SUBMITTALS**

- A. Submit under provisions of Section 01300.
- B. Shop Drawings shall show details of construction, reinforcing, mountings, and anchoring.
- C. Submit manufacturer's product literature and installation instructions for each type of wall and corner guard and installation accessory required. Include methods of installation for each type of installation for each type of substrate.
- D. Submit written data on physical characteristics, durability, resistance to fading and flame resistance characteristics.
- E. Samples:
  - 1. 12" long samples of each type of wall and corner guard required.
  - 2. 12 inch by 12-inch sample wall protection material, including 6-inch long sample of vertical trim, inside and outside corners and wainscot trim.
- F. Test Results: Submit certified test reports evidencing compliance with requirements for the following:
  - 1. Flame Spread: Not more than 25.
  - 2. Smoke developed: Not more than 450.
  - 3. Test Method: NFPA 255.
- G. Shop drawings showing locations, extent, and installation details of wall and corner guards, and other protection systems. Show methods of attachment to adjoining construction.

#### **1.06 QUALITY ASSURANCE**

- A. Installer Qualifications: Engage an experienced Installer who has previously installed wall surface protection systems similar in material, design, and extent to the systems indicated for this Project.
- B. Manufacturer Qualifications: Firm experienced in manufacturing wall surface protection system components that are similar to those required for this Project and that have a record of successful in-service performance.

- C. Fire Performance Characteristics: Provide wall surface protection system components that are identical to those tested in accordance with ASTM E 84 for the fire performance characteristics indicated below. Identify wall surface protection system components with appropriate markings from the testing and inspection organization.
  - 1. Flame Spread: 25 or less.
  - 2. Smoke Developed: 450 or less.
- D. Impact Strength: Provide wall surface protection system components with a minimum impact resistance of 25.4 ft. x lb/sq. ft. when tested in accordance with ASTM D 256 (Izod impact, ft. x lb/in. notch).
- E. Single Source Responsibility: Obtain each color, grade, finish, and type of wall surface protection system component from a single source with resources to provided products of consistent quality in appearance and physical properties without delaying progress of the Work.
- F. Design Criteria: The drawings indicate the location size, profile and dimensional requirements of wall surface protection system components required and are based on the specific types and models indicated. Wall surface protection system components by other manufacturers may be considered provided deviations in dimensions and profiles are minor and do not change the design concept as judged by the Contracting Officer. The burden of proof of equality is on the Contractor.

#### **1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver materials to Project site in original factory wrappings and containers, clearly labeled with identification of manufacturer, brand name, quality or grade, and fire hazard classification.
- B. Store wall surface protection materials in original undamaged packages and containers inside a well-ventilated area protected from weather, moisture, soiling, extreme temperatures, and humidity.
  - 1. Maintain room temperature within the storage area at not less than 70 deg F during the period plastic materials are stored. Keep sheet material out of direct sunlight to avoid surface distortion.
  - 2. Store rigid plastic corner guard covers in a vertical position, and rigid plastic wall guard and handrail covers in a horizontal position for a minimum of 72 hours, or until the plastic material attain the minimum room temperature of 70 deg F.

#### **1.08 MAINTENANCE**

- A. Maintenance Instructions: Provide the manufacturer's instructions for maintenance of installed work. Include recommended methods and frequency for maintaining optimum condition under anticipated traffic and use conditions. Include precautions against cleaning materials and methods that may be detrimental to finishes and performance.
- B. Replacement Materials: After completion of work, deliver not less than 5 percent of each type, color, and pattern of wall surface protection materials and components. Include accessory components as required. Replacement materials shall be from the same production run as materials installed. Package replacement materials with protective covering, identified with appropriate labels.

### **PART 2 - PRODUCTS**

#### **2.01 BUMPER & CORNER GUARDS**

- A. BUMPER GUARDS: Provide bumper guards to match existing color, shape, size, and style.
  - 1. Provide continuous aluminum retainers of 6063-T5 aluminum alloy. Rail covers shall be extruded rigid polyvinyl chloride, minimum thickness of .078".
  - 2. Rail covers shall be self extinguishing per ASTM D 635, meet flame spread requirement of 25 per ASTM E 84, and achieve a non-flaming smoke density rating of 400 per ASTM E 662
  - 3. Provide high impact molded returns and corners.
  - 4. Provide aluminum wall brackets furnished complete with toggle bolts.
- B. CORNER GUARDS: Provide corner guards to match existing color, shape, size, and style. Provide material in 90-degree corners, with mounting holes 8" on center and formed edges.

1. Provide corner guards with aluminum retainer secured to wall with appropriate mounting devices, covered with high impact vinyl/acrylic extrusion, locked in place, to absorb heavy impact without damage to guard, retainer or adjacent wall.
2. Mounting: Surface mounted, ceiling height.
3. Corner radius: 1/4"
4. High Impact Vinyl/Acrylic Alloy: Minimum .110" thick, Class A Fire rating, chemical and stain resistant.

## **2.02 FABRICATION**

- A. General: Fabricate wall protection systems to comply with requirements indicated for design, dimensions, details, finish, and member sizes, including wall thickness of components.
- B. Preassemble components in the shop to the greatest extent possible to minimize field assembly. Disassemble only as necessary for shipping and handling.
- C. Fabricate components with tight seams and joints with exposed edges rolled. Provide surfaces free of evidence of wrinkling, chipping, uneven coloration, dents, and other imperfections. Fabricate members and fittings to produce flush, smooth, and rigid hairline joints.
- D. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors for inter-connection of members to other construction.
- E. Provide inserts and other anchorage devices for connecting components to concrete or masonry. Fabricate anchoring devices to be capable of withstanding imposed loads. Coordinate anchoring devices with the supporting structure.

## **2.03 FINISHES**

- A. General: Comply with NAAMM "Metal Finishes Manual" for recommendations relative to application and designations of finishes.
- B. Finish designations prefixed by "AA" conform to the system established by the Aluminum Association for designating aluminum finishes.
- C. Aluminum Mill Finish: AA-M10 (Mechanical Finish: as fabricated, unspecified).

# **PART 3 - EXECUTION**

## **3.01 INSTALLATION**

- A. Examine areas and conditions in which wall surface protection components and wall protection systems will be installed.
- B. Do not proceed with installations until unsatisfactory conditions have been corrected.
- C. Bumper and Corner Guards shall be installed straight and plumb with all horizontal lines level and rigidly anchored to the supporting construction. Where indicated, anchorage to the walls shall be toggle bolting.
  1. Complete all finishing operations, including painting, before beginning installation of wall surface protection system materials. Drilling and cutting for installation of anchors shall be at locations that will be concealed in the finished work.
- D. Do not use material with chips, cracks, voids, stains or other defects, which might be visible in the finished work.
- E. Install material and assemblies to comply with drawings and final shop drawings in strict compliance with manufacturer's printed instructions. Adjust accessories for proper system alignment.

## **3.02 CLEANING**

- A. Bumper and corner guards shall be cleaned and protected from damage until acceptance.

## **3.03 QUALITY CONTROL**

- A. The Contractor shall establish and maintain quality control for operations under this section to assure compliance with contract requirements and shall maintain records of his quality control for all materials, equipment and construction operations, including, but not limited to the following:
- B. Preparatory inspection: (To be conducted prior to commencing work).
  - 1. Review shop drawing and material requirements.
  - 2. Submit shop drawings, samples or material certification as required.
- C. Initial inspection: (To be conducted after a representative sample of the work is complete).
  - 1. Check installation to assure proper anchorages, alignment and operation.
  - 2. Check finish to assure color is approved.
  - 3. Check for damages or defects and that corrective action is taken.
- D. Follow-up inspection: (To be conducted daily to assure compliance with results of initial inspection).
  - 1. Check all items mentioned in preparatory and initial inspections.

**END OF SECTION**

## **SECTION 09260: GYPSUM BOARD SYSTEMS**

### **PART 1 GENERAL**

#### **1.01 RELATED SPECIFICATION SECTIONS:**

- A. Section 01000 – GENERAL REQUIREMENTS

#### **1.02 WORK INCLUDED**

- A. Gypsum board.
- B. Taped and sanded joint treatment.

#### **1.03 REFERENCES**

- A. ANSI/ASTM C36 - Gypsum Wallboard.
- B. ANSI/ASTM C79 - Gypsum Sheathing Board.
- C. ANSI/ASTM C475 - Joint Treatment Materials for Gypsum Wallboard Construction.
- D. ANSI/ASTM A570 - Hot Rolled Carbon Steel Sheet and Strip, Structural Quality
- E. ANSI/ASTM C754 - Installation of Framing Members to Receive Screw Attached Gypsum Wallboard, Backing Board, or Water Resistant Backing Board.
- F. ANSI/ASTM C646 - Steel Drill Screws for the Application of Gypsum Sheet Material to Light Gage Steel Studs.
- G. FS HH-I-521 - Insulation Blankets, Thermal (Mineral Fiber, for Ambient Temperatures).
- H. GA-20' - Gypsum Board for Walls and Ceilings.
- I. GA-214 – Recommended Levels of Gypsum Board Finish
- J. GA-216 - Recommended Specifications for the Application and Finishing of Gypsum Board.
- K. Gypsum Construction Handbook, published by United States Gypsum Board Co.

#### **1.04 QUALITY ASSURANCE**

- A. Applicator: Company specializing in gypsum board systems work with 3 years documented experience, and approved by manufacturer.

#### **1.05 SUBMITTALS**

- A. Submit product data, including but not limited to, manufacturer's installation instructions, metal accessories, gypsum board, joint tape, screws, texturing material, drywall compound, etc., under provisions of Section 01300.
- B. Submit one sample of gypsum board panels, 2'x2', illustrating textured finish.

#### **1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver, store, protect and handle products in accordance with Section 01600.

### **PART 2 PRODUCTS**

#### **2.01 ACCEPTABLE MANUFACTURERS**

- A. Domtar, Georgia-Pacific, Gold Bond, Temple-Inland, U. S. Gypsum Co.
- B. Substitutions: Under provisions of Section 01000.

#### **2.02 GYPSUM BOARD MATERIALS**

- A. Fire Rated Gypsum Board: ANSI/ASTM C36; fire resistive type, UL rated; 5/8 inch thick, maximum permissible length; ends square cut, tapered edges.
- B. Moisture Resistant and Fire Resistant Gypsum Board: ANSI/ASTM C630; 5/8-inch thick, maximum permissible length; ends square cut, tapered edges.
- C. Gypsum Sheathing Board: ANSI/ASTM C79; moisture resistant and fire resistant type; 1/2 inch thick, maximum permissible length; ends square cut, book tongue and grooved edges; water repellent paper faces.
- D. Fasteners: Self-drilling, self-tapping, corrosive-resistant screws as recommended by the gypsum board manufacturer.

### 2.03 ACCESSORIES

- A. Corner Beads, Edge Trim, Control Joints, Casing Beads, and Accessories: Metal.
- B. Joint Materials: ANSI/ASTM C475; GA 201 and GA 216; reinforcing tape, joint compound, adhesive, water, and fasteners.

## PART 3 EXECUTION

### 3.01 INSPECTION

- A. Verify that site conditions are ready to receive work and opening dimensions are as indicated on drawings.
- B. Beginning of installation means acceptance of existing surfaces.

### 3.02 GYPSUM BOARD INSTALLATION

- A. Install gypsum board in accordance with GA 201, GA 214, GA 216, Gypsum Construction Handbook, and in accordance with manufacturer's written instructions. Butt all joints loosely with maximum joint of 1/8". Maximum joint at outlet box, switch box and other similar devices, 3/8".
- B. Erect single layer standard gypsum board in most economical direction, with ends and edges occurring over firm bearing.
- C. Erect single layer fire rated gypsum board vertically, with edges and ends occurring over firm bearing. Applies regardless of fire rating of wall.
- D. Erect exterior gypsum sheathing horizontally, with edges butted tight and ends occurring over firm bearing.
- E. Use screws when fastening gypsum board to metal furring or framing.
- F. Double Layer Applications: Use fire rated gypsum-backing board for first layer of fire rated partitions. Tape and mud joints. Place second layer parallel to first layer. Offset joints of second layer from joints of first layer.
- G. Place corner beads at external corners. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.

### 3.03 CONTROL JOINTS

- A. Provide control joints at each side of door and window openings from the header to the top of the wall. Attach control joint to double studs spaced 0.5" apart.
- B. Provide control joints:
  - 1. Where partitions or ceilings of dissimilar construction meet and remain in the same plane.
  - 2. Wings of "L", "U", & "T" shaped ceiling areas are joined.
  - 3. Where control or expansion joints occur in the base wall construction and/or structure.
- C. Maximum control joint spacing:
  - 1. Partitions, 30 feet maximum in either direction.

2. Interior Ceilings with perimeter relief, 50 feet maximum in either direction.
3. Interior Ceilings without perimeter relief, 30 feet maximum in either direction.
4. Exterior Ceilings, 30 feet maximum in either direction.

**3.04 JOINT MATERIALS/FINISH**

- A. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive final finish coat. All walls will be textured with a minimum 'orange peel' texture unless otherwise noted. Provide 12" x 12" sample of texture coat on 5/8" gypsum board for review, approval and record. The approved sample will serve as the standard of quality the contractor must achieve with the actual final finish. Minimum finish will be Level 3 for textured walls and Level 5 for untextured walls.
- B. Walls with indentations, visible joint lines, ripples, surface defects, etc. will not be accepted.
- C. Feather coats onto adjoining surfaces so that camber is maximum 1/32 inch.
- D. Erect in accordance with manufacturer's instructions.

**3.05 TOLERANCES**

- A. Maximum Variation from True Flatness: 1/8 inch in 10 feet in any direction.

**END OF SECTION**

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